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ABSTRACT

Academic failure is a common threat to many students in universities. Addressing this issue are intervention techniques that attempt to alleviate the negative consequences of failure and ensure continued striving for success. Attributional training is one specific approach that has been demonstrated to improve performance for at-risk students who are defined either by low academic success or low perceived success. Together, these variables define a level of accuracy of students' perceived success. Participants were 150 college students from a Canadian university who received attributional retraining that involved viewing a videotape in which senior students discussed how changing the ways they thought about failure experiences improved their performance. Immediately following the attributional retraining it was found that postlecture test scores improved, and in the long run, final psychology course grade and motivation improved. These results add to the literature that defines those students who will benefit from attributional retraining. (Contains eight references.) (SLD)

Assisting At-Risk Students:

The Role of Perceived and Actual Success.

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Abstract

Academic failure is a common threat to many students in university. Addressing this issue are intervention techniques which attempt to alleviate the negative consequences of failure and ensure continued striving for success. Specifically, attributional retraining has been demonstrated to improve performance for at-risk students who are defined by either low academic success or low perceived success. Together these variables define a level of accuracy of students perceived success. Immediately following attributional retraining it was found that post-lecture test scores improved, and in the long term final psychology course grade and motivation improved. These results add to the literature which define those students who will benefit from attributional retraining.

Assisting At-Risk Students:

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Improving students' motivation and academic achievement has been a focus of increasing research interest. In particular, attributional retraining fits within attribution theory (Weiner, 1986), focusing on altering causal ascriptions (Försterling, 1985; Perry, Hechter, Menec, & Weinberg, 1993; Weiner, 1988). By teaching students to ascribe controllable and unstable causes, rather than uncontrollable and stable causes, to failure outcomes attributional retraining has improved students' achievement (Menec, Perry, Struthers, Schonwetter, Hechter, & Eichholz, 1994; Perry, & Struthers, 1994). If a student fails an examination and concludes that it is because of a lack of ability, the consequences include feelings of hopelessness and shame, which are demotivating and may lead to reduced striving and poor future success. Attributional retraining typically alters the causal ascription to lack of effort, interpreted as unstable and controllable, inducing feelings of hopefulness and guilt, which are motivating. With regard to past studies, Weiner (1988) suggests that future research "take more cognisance of the entire theoretical perspective" (p.104). Including modification of causal antecedents, change of behaviour, and/or altering perceived outcome. The last technique is related to the present research. Does accuracy of perceived success moderate the effectiveness of attributional retraining?

It is reasonable to assume that an unexpected grade suggest an initially inaccurate perception about the original performance. This will invoke a different reaction and causal search process than a grade that was originally perceived accurately and thus is expected. This is supported in Weiner's (1986) model in which negative, important, or unexpected outcomes are instrumental to causal search. Furthermore, previous research has identified low actual success (Menec, Perry, Hechter, Struthers, Schonwetter, & Eichholz, 1994) and low perceived success (Perry & Struthers, 1994) as variables which label students as being at-risk. These at-risk students have been shown to benefit from attributional retraining, as measured by post-lecture test scores

or final course grade. Thus, perceived and actual success are critical variables for defining at-risk students, though the full relationship between them has not yet been explored. Perceived success was defined in this study as low/high perceived success (LPS vs. HPS) on an aptitude-type test, and actual success by low/high actual success (LAS vs. HAS), on the same test. Differences in accuracy of students' perceived success may hinder attributional retraining as measured by: an achievement test, perceived control, motivation, stress, expected grade, and final course grade.

Method

The participants were 150 introductory psychology students from a Canadian university who received partial course credit in return for their participation. The study was conducted in two phases: Phase 1 in October included measures to determine students' accuracy of perception of their achievement performance. Students' actual performance was measured with a 25 item abstract reasoning and abilities test (ARAT) (Perry & Dickens, 1984) and perceived success was assessed by asking the students' how successful they were on the ARAT, creating a four cell matrix of low/high perceived X low/high actual success categories. The final variable, whether participants received attributional retraining or the control condition, was randomly assigned to experimental sessions.

Attributional retraining involved viewing a videotape in which senior students discussed how changing the way they thought about failure experiences improved their performance. Prior to the video, directions were read which indicate that evidence suggests that how people think about outcomes, in particular negative outcomes, greatly affects their future performance. Immediately following attributional retraining students' viewed a videotaped lecture (Perry, 1991), followed by a 30-item, multiple-choice test on material presented in the lecture. Results of the achievement test (maximum 30), motivation items (1 = low, 10 = high), perceived control items (1 = low, 10 = high), and expected psychology course grade (0 = F, 2 = D, 4 = C, 5 = C+, 6 =

B, 7 = B+, 8 = A, 9 = A+) were used as measures of the immediate effectiveness of attributional retraining.

Phase 2 was conducted in March and assessed long-term effects of attributional retraining. Measures of stress, perceived control, motivation, health, and final psychology course grade were used as indicators of attributional retraining effects.

Results

A median split was performed on the aptitude test scores, actual success (AR), which had a maximum of 25 (Median = 11, $\underline{M}$ = 11.13, $\underline{SD}$ = 3.13), and the perceived success (PS) question regarding the aptitude test, maximum 10 (Median = 4, $\underline{M}$ = 4.04, $\underline{SD}$ = 2.13). Low (L) and high (H) levels of these variables created four groups (LAS/LPS, LAS/HPS, HAS/LPS, & HAS/HPS) which were further divided into control (CONT) or attributional retraining (AR) groups.

Using ANOVA techniques, phase 1 results revealed significant ($\underline{p}<.05$) AR main effects for the achievement test with AR ($\underline{M}$ = 20.07, $\underline{SD}$ = 4.32) out performing CONT ($\underline{M}$ = 18.55, $\underline{SD}$ = 5.12), $F(1,143) = 4.26$, $\underline{MS}_e = 19.55$. Significant phase 1 main effects were also found for perceived success in the variables; perceived control, $F(1,123) = 8.39$, and expected grade, $F(1,111) = 6.40$. Actual success main effects were evident in the achievement test, $F(1,143) = 25.49$ and the perceived control measure, $F(1,123) = 7.13$. No significant interactions were detected.

Phase 2 results were similar to phase 1, most notable was a significant AR main effect on the final course grade of the participants. AR ($\underline{M}$ = 5.46, $\underline{SD}$ = 2.04) outperformed CONT ($\underline{M}$ = 4.26, $\underline{SD}$ = 2.57), $F(1,105) = 4.37$, $\underline{MS}_e = 4.68$. This translates to an increase of 0.6 on a 4 point G.P.A. scale, a high "C+" versus a low "C". As many universities recognise G.P.A.s lower than "C" as grounds for placing students on academic probation, attributional retraining removes at-risk students from this threat. Finally, correlations between the phase 1 expected grade measure and final course grade were calculated. Not surprisingly, the expected grades of the accurate perceiving groups correlated

to the final grade (CONT-LPS/LAS r=.646 p=.009; CONT-HPS/HAS r=.774 p=.005; AR-LPS/LAS r=.819 p=.013; AR-HPS/HAS r=.880 p=.0001), but the inaccurate groups expectations were not correlated (CONT-LPS/HAS r=.357 p=.386; CONT-HPS/LAS r=.111 p=.777; AR-LPS/HAS r=.472 p=.076; AR-HPS/LAS r=.420 p=.261).

Discussion

The immediate benefits of attributional retraining are seen in the improved post-lecture achievement test scores. Regardless of individual differences, students who had experienced attributional retraining improved on the achievement test. Though immediate improvement on a test results from retraining, increased expectancy and other cognitive measures only is revealed in long term measures, possibly from repeated demonstration of success by objective measures. Long-term benefits, such as improved course grade and motivation, were significantly higher following attributional retraining.

Given that there were no significant interactions but that expected grade only correlates with actual grade for subjects' that accurately perceive grades the full dynamics of the role of accuracy may not be fully revealed. Further research is needed on the issue of whether intervention methods should also focus on helping students accurately perceive their performance.

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